



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/780,579	02/09/2001	Jeff B. Erwin	06576-105019 (MS #150875.	1605
20786	7590	02/16/2005	EXAMINER PHAN, MAN U	
KING & SPALDING LLP 191 PEACHTREE STREET, N.E. ATLANTA, GA 30303-1763			ART UNIT 2665	PAPER NUMBER

DATE MAILED: 02/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/780,579

**Applicant(s)**ERWIN, JEFF B. **Examiner**

Man Phan

**Art Unit**

2665

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 October 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Response to Amendment and Argument***

1. This communication is in response to applicant's 10/07/2004 Amendment in the application of Erwin for a "method and apparatus for network analysis, such as analyzing and correlating identifiers of frame relay circuits in a network" filed 02/09/2001. The proposed amendments to the claims have been entered and made of record. Claims 1, 4, 14-16 have been amended and new claims 20-38 have been added. Claims 1-38 are pending in the application.

2. Applicant's amendment and argument to the amended claims are insufficient to distinguish the claimed invention from the cited prior arts or overcome the rejection of said claims under 35 U.S.C. 103 as discussed below. Applicant's amendment and argument with respect to the pending claims have been fully considered, but are moot in view of the new grounds of rejection, and will be examined as follows.

3. Applicant's argument with respect to the rejected claims (pages 7-8) that the cited reference does not disclose "the statistical data representing more than one type of statistic" or "different types of statistics", or "multiple type of statistical data". However, the features upon which applicant relies are not recited in the rejected claims. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (fed. Cir. 1993). It's noted that, in operation, a system administrator may edit a configuration file to specify the type of history data to be collected for particular machines and/or applications, so that different types of statistics are collected from

different components of server cluster. Among the myriad types of information that may be collected are statistics describing the overall workload of a machine, the number of network requests received during a predetermined time interval by a particular machine or application, the number of users connected to a particular machine or application, the system resources (such as memory allocations) utilized to service needs for local processing such as backup routines. Also, the types of statistics to be collected can include: Bandwidth of connection; Length of connection; Total number of cells transmitted; Bit error rate; Source and destination addresses; Start time of connection; and Number of cells rejected because they were in excess of requested bandwidth. These statistics are collected by a computer program executed tool known as a capacity manager. Therefore, examiner maintains that the references cited and applied in the last office actions for the rejection of the claims are maintained in this office action.

### *Drawings*

4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Fig. 3 is best described for claimed invention. Therefore, newly added limitation “collection of statistical data associated with each device over a shorter time interval indicates a connection” (claim 20), “collection occurs repeatedly over increasingly shorter time intervals” (claims 21, 34), “confirming collection is inconsistent with potentially connected devices” (claims 22, 35), “accounts for skew in time of collecting” (claim 26), “statistical data is within a threshold” and

“increasing the threshold” (claims 28, 29, 37, 38) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled “Replacement Sheet” in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

#### ***Claim objections***

5. Claim 27 is objected to because of the following informalities: on line 5 “a video service data system receiving audio data” should read --a video service data system receiving video data-- for the purpose of art rejection. Appropriate correction is required.

***Claim Rejections - 35 .S.C. 112, first paragraph***

6. Claim1 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The newly added “collection of statistical data associated with each device over a shorter time interval indicates a connection” (claim 20), “collection occurs repeatedly over increasingly shorter time intervals” (claims 21, 34), “confirming collection is inconsistent with potentially connected devices” (claims 22, 35), “accounts for skew in time of collecting” (claim 26), “statistical data is within a threshold” and “increasing the threshold” (claims 28, 29, 37, 38) has no support in the disclosure.

***Claim Rejections - 35 USC ' 101***

7. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

8. Claims 20-38 are rejected under 35 U.S.C. 101 because the claimed invention is not supported by either a specific asserted utility or a well established utility. Claims 20-38 merely defines “*a computer-readable medium*” or *data record*, and is not directed to statutory subject matter. It’s not tangibly embodies and non-functional descriptive material - data per se.

While the claim recite a computer readable medium or data record for generating controlling connections between devices of a network, the data record structure being claimed does not satisfy the definition of “data format structure” known to those skilled in the art. As an example, the Computer Dictionary third edition (Microsoft Press) describes a “data format structure” as “an organizational scheme, such as a record or array, that can be applied to data to facilitates interpreting the data or performing operation on it”. However, in claims 20-38, the claims do not manipulate data representing physical objects or activities to achieve a practical application (i.e., pre-computing process activity). Pre-computing process activity requires the measurements of physical objects or activities to be transformed outside of the communications protocol into the communications data structure, where the data comprises signals corresponding to physical objects or activities external to the communication system, and where the process causes a physical transformation of the signals which are intangible representations of the physical objects or activities. Therefore, what applicant is attempting to claim as a readable medium or data record as is known in the art. The claim is actually drawn to non-functional descriptive material stored on a computer readable medium. The description given in the specification does not cure this problem. In practical terms, claims define non-statutory processes if they simply manipulate abstract ideas, e.g., a bid or a bubble hierarchy, without some claimed practical application, *Schrader*, 22 F.3d at 293-94, 30 USPQ2d at 1458-59; *Warmerdam*, 33 F.3d at 1360, 31 USPQ2d at 1759.

Claims 20-38 is also rejected under 35 U.S.C. 112, first paragraph. Specifically, since the claimed invention is not supported by either a specific asserted utility or a well established utility

Art Unit: 2665

for the reasons set forth above, one skilled in the art clearly would not know how to use the claimed invention.

***Claim Rejections - 35 USC ' 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 14, 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bosa et al. (US#6,115,362) in view of Albert et al. (US# 6,606,316).

Regarding claim 14, the references disclose method and system for mapping of frame relay circuits in computer network, according to the essential features of the claim. Bosa discloses receiving segment addresses of selected network segments in the network, wherein each segment includes at least a portion spanning a public switched network and wherein each selected network segment is defined by pairs of segment addresses, obtaining statistical data associated with each identified segment address in the network, analyzing the obtained statistical data to identify similar statistical data and identifying the pairs of segment addresses corresponding to the selected network segments, based on the identified similar statistical data (col. 8., line 1 - col. 9, line 38). However, Bosa does not disclose expressly the statistical data



representing different types of statistics. In the same field of endeavor, Albert et al. (US#6,606,316) disclose a method of gathering statistics about packets includes determining at a service manager statistics that are to be gathered for a flow and sending instructions to a forwarding agent from the service manager detailing how to gather statistics for the flow. The forwarding agent is implemented on a network device and the forwarding agent is operative to receive statistics gathering instructions for a flow from the service manager (*Forwarding agents record different types of statistics*). A report is received at the service manager of statistics gathered at the forwarding agent according to the instructions sent by the service manager. A service manager includes a processor configured to determine statistics that are to be gathered for a flow. A forwarding agent sending interface is configured to send instructions to a forwarding agent from the service manager detailing how to gather statistics for the flow. The forwarding agent is implemented on a network device and the forwarding agent is operative to receive statistics gathering instructions for a flow from the service manager. A forwarding agent receiving interface is configured to receive a report at the service manager of statistics gathered at the forwarding agent according to the instructions sent by the service manager (Col. 4, lines 12 plus and Col. 27, lines 57 plus).

Regarding claim 15, Bosa discloses correlation factors (col. 9, lines 11-38), which meet the limitation of refined statistical data associated with the identified potential pairs. These correlation factors confirm the pairs of segment addresses.

Art Unit: 2665

11. Claims 1-13 and 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bosa et al. (US 6, 115,362) in view of Albert et al. (US# 6,606,316), and further in view of Seid et al. (US 5,768,271).

Regarding claims 1 and 16, Bosa and Albert disclose the claimed limitations as discussed in the paragraph 10 above. Bosa further discloses creating a list of unmatched data link connection identifiers, polling network devices associated with the data link connection identifier, obtaining statistical data associated with each identified segment address in the network, analyzing the obtained statistical data to identify similar statistical data and identifying the pairs of segment addresses corresponding to the selected network segments (col. 8., line 1 - col. 9, line 38). However, Bosa and Albert fail to expressly disclose that the network is a virtual private network. Seid discloses that Virtual Private Networks (VPNs) are a collection of logical nodes and virtual paths (VPs) and include one or more virtual circuits (VCs) (see Abstract). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use a VPN for the network in the invention of Bosa. One of ordinary skill in the art would have been motivated to do this in order to provide added security to the network connections.

Regarding claims 2, Bosa discloses correlation factors, which meet the limitation of refined statistical data associated with the identified potential pairs (col. 9, lines 11-38). These correlation factors confirm the pairs of segment addresses.

Regarding claim 3, Bosa discloses traffic tables (45A-45N) and correlation matrices (46A-46N), which meet the limitation of storing the pairs of segment addresses in a database (see Figure 4).

Regarding claim 4, Bosa discloses a trace profile of each of the segment address (see Figure 8), which meets the limitation of statistical fingerprints for each segment address.

Regarding claims 5 and 18, Bosa discloses that the statistical fingerprints of a pair of segment addresses are inverses of each other (col. 8, lines 1-15).

Regarding claims 6-8 and 19, Bosa discloses aggregating a predetermined set of core statistics, which includes the number of bytes sent and received (col. 6, lines 50-64).

Regarding claim 9, Bosa discloses polling network devices for obtaining statistical data (col. 6, lines 50-59).

Regarding claim 10, Bosa discloses that each network device may be a router (col. 6, line 10-25).

Regarding claims 11 and 12, Bosa discloses that the segment addresses comprise a data link circuit identifier (DLCI) (see Figures 8-10).

Regarding claim 13, Bosa discloses that the method of claim 1 may be implemented in a computer-readable medium having computer-executable instructions (col. 9, lines 48-67).

Regarding claim 17, Bosa discloses polling at predetermined intervals (col. 8, line 52-col. 9, line 2).

### ***Conclusion***

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The Koperda (US#5,790,806) is cited to show the cable data network architecture

The Triulziet al. (US#2004/0117478) is cited to show the monitoring network activity.

The Mozes (US#6,732,085) is cited to show the method and system for sample size determination for database optimizers.

The Bland et al. (US#5,7322,218) is cited to show the management data gathering system for gathering on clients and servers data regarding interactions between the servers, the clients, and users of the clients during real use of a network of clients and servers.

The Spell et al. (US#6,208,640) is cited to show the predictive bandwidth allocation method and apparatus.

The Schow (US#6,751,226) is cited to show the system and method for providing managed frame relay service.

The Ordanic et al. (US#5,751,964) is cited to show the system and method for automatic determination of thresholds in network management.

The Lewis et al. (US#5,872,928) is cited to show the method and apparatus for defining and enforcing policies for configuration management in communications networks.

The Boyd et al. (US#6,360,261) is cited to show the system and method for analyzing remote traffic data in distributed computing environment.

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION THIS ACTION IS MADE FINAL**. See MPEP ' 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after

Art Unit: 2665

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. Phan whose telephone number is (571) 272-3149. The examiner can normally be reached on Mon - Fri from 6:00 to 3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu, can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2600.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**or faxed to:**

(703) 872-9306, (for formal communications intended for entry)

Or:

(571) 273-3149 (for informal or draft communications, please label "PROPOSED" or "DRAFT")

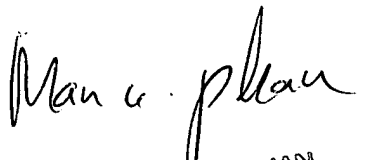
Art Unit: 2665

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,  
Arlington. VA., Sixth Floor (Receptionist).

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have any questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at toll free 1-866-217-9197.

Mphan

Feb. 10, 2005

  
MAN U. PHAN  
PRIMARY EXAMINER